

1           1.     In a system having one or more video ports for receiving one or more  
2 television broadcasts, each television broadcast having broadcast data, a method for  
3 accessing the broadcast data by one or more applications, the method comprising the steps  
4 of:

5                 collecting, by one or more miniports, the broadcast data from the one or more  
6 video ports;

7                 transferring the broadcast data from the one or more miniports to a common  
8 application interface; and

9                 presenting, by the common application interface, the broadcast data to the  
10 one or more applications.  
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12           2.     A method as defined in claim 1, wherein the step of collecting further  
13 comprises the step of registering each of the one or more video ports with one of the one or  
14 more miniports.  
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16           3.     A method as defined in claim 1, wherein the step of collecting further  
17 comprises the step of receiving a request for broadcast data from the one or more  
18 applications.  
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20           4.     A method as defined in claim 1, wherein the step of collecting further  
21 comprises the step of separating broadcast data that complies with a protocol from broadcast  
22 data that does not comply with the protocol.  
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24           5.     A method as defined in claim 4, wherein the protocol is UDP/IP.

1           6.       A method as defined in claim 4, wherein the step of separating broadcast data  
2 further comprises the step of appending the broadcast data that does not comply with the  
3 protocol with headers such that the broadcast data complies with the protocol.

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5           7.       A method as defined in claim 1, wherein the common application interface is  
6 Winsock.

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8           8.       A method as defined in claim 1, wherein the common application interface is  
9 a RawData interface.

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11          9.       A method as defined in claim 1, wherein the common application interface is  
12 a presenter interface.

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14          10.      A method as defined in claim 9, wherein the presenter interface performs at  
15 least one of the steps of:

16                   formatting the broadcast data;  
17                   duplicate filtering the broadcast data;  
18                   demultiplexing the broadcast data;  
19                   instance filtering the broadcast data; and  
20                   aggregating the broadcast data  
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1           11.     In a system capable of receiving broadcast data over one or more television  
2 broadcasts, a method for presenting broadcast data embedded in the one or more television  
3 broadcasts to an application, the method comprising the steps of:

4                     capturing the broadcast data in the one or more television broadcasts by a  
5 broadcast data source;

6                     delivering the captured broadcast data to a miniport;

7                     transferring the broadcast data from the miniport to a common application  
8 interface;

9                     retrieving the broadcast data from the common application interface by a  
10 presenter; and

11                    preparing the broadcast data, by the presenter, for presentation to the  
12 application.

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14           12.     A method as defined in claim 11, wherein the miniport performs the steps of:

15                     differentiating broadcast data that complies with a protocol from broadcast  
16 data that does not comply with the protocol; and

17                     encapsulating the broadcast data that does not comply with the protocol with  
18 headers such that the broadcast data complies with the protocol.

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20           13.     A method as defined in claim 12, wherein the protocol is UDP/IP.

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22           14.     A method as defined in claim 11, wherein the step of transferring the  
23 broadcast data further comprises the steps of:

24                     transferring the broadcast data from the miniport to NDIS;

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transferring the broadcast data from NDIS to a protocol; and  
transferring the broadcast data from the protocol to the common application  
interface.

15. A method as defined in claim 11, wherein the common application interface  
is Winsock.

16. A method as defined in claim 11, wherein the common application interface  
is a RawData interface.

17. A method as defined in claim 11, wherein the step of preparing the broadcast  
data further comprises at least one of the steps of:  
demultiplexing the broadcast data;  
aggregating the broadcast data;  
instance filtering the broadcast data;  
duplicate filtering the broadcast data; and  
formatting the broadcast data for the application.

18. A method as defined in claim 11, wherein the step of delivering further  
comprises the step of receiving, by the miniport, a request from the application for the  
broadcast data.

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19. A method as defined in claim 11, wherein the step of capturing the broadcast data further comprises the step of enabling the broadcast data source.

1           20.    In a system having one or more broadcast data sources capable of receiving  
2 television broadcasts having broadcast data, a method for collecting the broadcast data from  
3 one or more broadcast data sources, the method comprising the steps of:

4                   providing a miniport for each broadcast data source, wherein each broadcast  
5 data source is capable of registering with the miniport;

6                   receiving a request from an application at the miniport for broadcast data  
7 from the broadcast data source; and

8                   collecting the requested broadcast data at the miniport from the broadcast  
9 data source.

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11           21.    A method as defined in claim 20, wherein the step of collecting further  
12 comprises the step of registering the broadcast data source with the miniport.

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14           22.    A method as defined in claim 20, wherein the step of collecting further  
15 comprises the step of requesting broadcast data from a broadcast data source.

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17           23.    A method as defined in claim 20, wherein the step of collecting further  
18 comprises the steps of:

19                   differentiating broadcast data that complies with a protocol from broadcast  
20 data that does not comply with the protocol; and

21                   encapsulating the non compliant broadcast data with headers such that the  
22 non complying broadcast data complies with a protocol.

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24. A method as defined in claim 20, wherein the step of collecting further comprises the step of separating requested broadcast data from unrequested broadcast data.

25. A method as defined in claim 20, further comprising the step of delivering the requested broadcast data to NDIS.

26. A method as defined in claim 20, further comprising the step of delivering the requested broadcast data to RawData.

1           27.    In a system capable of receiving television broadcasts having broadcast data,  
2 a method for presenting the broadcast data to one or more applications, the method  
3 comprising the steps of:

4                   receiving the broadcast data collected from the television broadcasts at a  
5 common application interface;

6                   accessing the common application interface by a presenter;

7                   processing the broadcast data by the presenter such that the broadcast data is  
8 prepared as required by the one or more applications requesting the broadcast data.  
9

10           28.    A method as defined in claim 27, wherein the common application interface  
11 is Winsock.  
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13           29    A method as defined in claim 27, wherein the common application interface  
14 is BDS RawData.  
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16           30.    A method as defined in claim 27, wherein the step of processing the  
17 broadcast data further comprises at least one of the steps of:

18                   demultiplexing the broadcast data;

19                   aggregating the broadcast data;

20                   instance filtering the broadcast data;

21                   duplicate filtering the broadcast data; and

22                   formatting the broadcast data for the one or more applications.  
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1           31.     In a system capable of receiving television broadcasts having broadcast data,  
2 a method for collecting broadcast data from one or more broadcast data sources, the method  
3 comprising the steps of:

4                 calling, by the broadcast data source, a function of a broadcast data source  
5 interface having one or more parameters, wherein the broadcast data source interface  
6 permits the one or more broadcast data sources to interface with one or more  
7 broadcast data source miniports; and

8                 executing the function by the broadcast data source interface;

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10           32.     A method as defined in claim 31, wherein the function comprises Register  
11 and the one or more parameters comprise ApplicationField, SelectRoutine, VideoPort,  
12 DataSource, and SourcingHandlePointer.

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14           33.     A method as defined in claim 31, wherein the function comprises DeRegister  
15 and the one or more parameters comprise SourcingHandle.

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17           34.     A method as defined in claim 31, wherein the function comprises Indicate  
18 and the one or more parameters comprise SourcingHandle, StreamID, Indication,  
19 DataLength, NumberFragments, Fragment0Length, and Fragment0Location.

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35. In a system capable of receiving television broadcasts having broadcast data, a method for presenting the broadcast data to one or more applications, the method comprising the steps of:

calling, by the one or more applications, a function having one or more parameters of a presenter interface, wherein the presenter interface provides the one or more applications access to a broadcast data presenter, the broadcast data presenter being capable of retrieving broadcast data from a common application interface; and

executing the function by the presenter interface

36. A method as defined in claim 35, wherein the function comprises SelectData and the one or more parameters comprise ApplicationField, PresentRoutine, VideoPort, DataType, InstanceFilter, AlternateMulticastIP, AlternateUDPPort, and PresenterHandlePointer.

37. A method as defined in claim 35, wherein the function comprises DeselectData and the one or more parameters comprise PresenterHandler.

38. A method as defined in claim 35, wherein the function comprises ReleaseData and the one or more parameters comprise PresenterHandle and DeliveryLocation.

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39. In a system capable of receiving television broadcasts having broadcast data,  
a method for providing the broadcast data to one or more applications or a presenter, the  
method comprising the steps of:  
  
calling, by the one or more applications or the presenter, a function having  
one or more parameters of a RawData interface, wherein the RawData interface  
permits the one or more applications or the presenter to interface with a RawData  
module; and  
  
executing the function by the RawData interface.

40. A method as defined in claim 39, wherein the function comprises  
SelectRawData and the one or more parameters comprise ApplicationField,  
RawDataCallbackRoutine, VideoPort, Datatype, InstanceInformation, Options, and  
RawDataHandlePointer.

41. A method as defined in claim 39, wherein the function comprises  
SelectRawData and the one or more parameters comprise RawDataHandle.

1           42.    A computer program product for implementing, in a system capable of  
2 receiving television broadcasts having broadcast data, a method for collecting the broadcast  
3 data from one or more broadcast data sources, the computer program product comprising:

4                   a computer readable medium carrying computer executable instructions for  
5 implementing the method, wherein the computer executable instructions comprise  
6 program code means for:

7                           calling, by a broadcast data source, a function of a broadcast data  
8 source interface, the function having one or more parameters, wherein the  
9 broadcast data source interfaces the one or more broadcast data sources with  
10 one or more broadcast data source miniports.  
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12           43.    A computer program product as in claim 42, wherein the function comprises  
13 register and the one or more parameters comprise ApplicationField, SelectRoutine,  
14 VideoPort, DataSource, and SourcingHandlePointer.  
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16           44.    A computer program product as in claim 42, wherein the function comprises  
17 deregister and the one or more parameters comprise SourcingHandle.  
18

19           45.    A computer program product as in claim 42, wherein the function comprises  
20 indicate and the one or more parameters comprise SourcingHandle, StreamID, Indication,  
21 DataLength, NumberFragments, Fragment0Length, and Fragment0Location.  
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1           46.    A computer program product for implementing, in a system capable of  
2 receiving television broadcasts having broadcast data, a method for presenting the broadcast  
3 data to one or more applications, the computer program product comprising:

4                   a computer readable medium carrying computer executable instructions for  
5 implementing the method, wherein the computer executable instructions comprise  
6 program code means for:

7                           calling, by an application, a function of a presenter interface, the  
8 function having one or more parameters, wherein the presenter interface  
9 provides the one or more applications with access to broadcast data prepared  
10 by a broadcast data presenter.  
11

12           47.    A computer program product as in claim 46, wherein the function comprises  
13 SelectData and the one or more parameters comprise ApplicationField, PresentRoutine,  
14 VideoPort, DataType, InstanceFilter, AlternateMulticastIP, AlternateUDPPort, and  
15 PresenterHandlePointer.  
16

17           48.    A computer program product as in claim 46, wherein the function comprises  
18 DeselectData and the one or more parameters comprise PresenterHandler.  
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20           49.    A computer program product as in claim 46, wherein the function comprises  
21 ReleaseData and the one or more parameters comprise PresenterHandle and  
22 DeliveryLocation.  
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50. A computer program product for implementing, in a system capable of receiving television broadcasts having broadcast data, a method for presenting the broadcast data to an application, the computer program product comprising:

a computer-readable medium carrying computer-executable instructions for implementing the method wherein the computer-executable instructions comprise:

program code means for collecting broadcast data from a broadcast data source;

program code means for transmitting the collected broadcast data to a common application interface; and

program code means for preparing the broadcast data for the application.